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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/804,178

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Shiro Yamagishi

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11/02/2006

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EXAMINER

SCHNEIDER, JOSHUA D

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/804,178	YAMAGISHI, SHIRO	
	Examiner	Art Unit	
	Joshua D. Schneider	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3 and 5 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant argues that there is no teaching of storing parameters in individual registers, but admits that the parameters are stored in memory. It is inherent to any storing in memory that the write function is directed to a specific register. The use of larger memory bank as opposed to discrete memory chips is notoriously well known in the art for cost and space efficiency in modern computer design. It is inherent to the use of such memory devices that the parameters being written are written to a specific register in the bank of memory. If they did not, the system would not be functional, as the write data could not be retrieved.
3. Applicant also argues that the Tojima does not describe two modes of operation. Tojima does in fact teach the two modes of operation, both a ring and rectangular transfer. This argument also is ineffective, as it does not overcome the rejections to the independent claims. The independent claims only require a single mode.
4. Applicant argues that the only motivation comes from the application, but this is not true, as the rejections have motivation found in the references. All other arguments are obviated by the new rejections.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claim 5 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0026543 to Tojima et al. in further view of U.S. Patent 6,370,601 to Baxter.

9. With regards to claim 1, Tojima teaches a first register, which sets the start address of a ring buffer (register inherent to storage in memory, paragraph 252-254), a second register which

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sets the number of DMA transfers from the start address to the end address of the ring buffer (register inherent to storage in memory, paragraph 254-256), but does not clearly teach a third register which sets the difference between the end address and the start address of the ring buffer. Baxter teaches that difference between the end address and the start address was well known to be included in the information to perform a DMA transfer (length, register inherent to storage in memory, column 3, lines 43-55). It would have been obvious to one of ordinary skill in the art to combine the length information of Baxter with the DMA controller of Tojima in order to reduce the processor load on the system.

10. With regards to claim 2, Tojima teaches a second rectangular mode (paragraph 252) wherein the second register is used as a register for setting the number of DMA transfers in a contiguous area (paragraph 253) including rectangular areas in the DMA transfer of a rectangular area included in an area (paragraph 252-254).

11. Claims 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2002/0026543 to Tojima et al. in further view of U.S. Patent 6,370,601 to Baxter and U.S. Patent 5,708,849 to Coke et al.

12. With regards to claim 3, Tojima fails to teach the address increment of a non-contiguous area. Coke teaches the third register is used as a register for setting the address increment of a non-contiguous area in the DMA transfer of a rectangular area included in an area (incrementer, Fig. 3, element 39, column 5, lines 65-69). It would have been obvious to one of ordinary skill in the art to combine the amount of information to be transferred of Coke with the DMA controller of Tojima in order to reduce the processor load on the system.

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13. With regards to claim 4, Tojima fails to teach, but Coke teaches a fourth register, which retains a current transfer address (Fig. 3, element 35), a counter which counts the number of DMA transfers set to the second register (Fig. 3, element 36), and an adder, which sums the value of the third register and the value of the fourth register when the counter has completed counting the number of DMA transfers set to the second register (Fig. 3, element 39). It would have been obvious to one of ordinary skill in the art to combine the length information of Baxter and increment information of Coke with the DMA controller of Tojima in order to reduce the processor load on the system.

14. With regards to claim 5, Tojima teaches in the case of ring buffer transfer, the program causes a computer to work as means for setting the start address of a ring buffer to a first register (paragraph 252-254), means for setting the number of DMA transfers from the start address to the end address of the ring buffer to a second register (paragraph 254-256), but does not clearly teach a third register which sets the difference between the end address and the start address of the ring buffer. Baxter teaches that difference between the end address and the start address was well known to be included in the information to perform a DMA transfer (length, column 3, lines 43-55). Tojima teaches in the case of rectangular block transfer said program causes the computer to work as means for setting the start address at the start of transfer to said first register (paragraph 252-254), means for setting the number of DMA transfers in a contiguous area including rectangular areas to a second register (paragraph 254-256), but does not clearly teach means for setting the address increment of a non-contiguous area to the third register. Coke teaches that setting the address increment of a non-contiguous area to the third register (Figs. 3 and 6, column 5, line 48, though column 8, line 47). It would have been obvious to one of

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ordinary skill in the art to combine the length information of Baxter and increment information of Coke with the DMA controller of Tojima in order to reduce the processor load on the system.

15. With regards to claim 6, Tojima teaches a first mode of operation corresponds to a ring buffer transfer, and said second mode of operation corresponds to a rectangular block transfer (paragraph 42).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Schneider whose telephone number is (571) 272-4158. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JDS


KIM HUYNH
SUPERVISORY PATENT EXAMINER

10/29/20